

PATENT ABSTRACTS OF JAPAN

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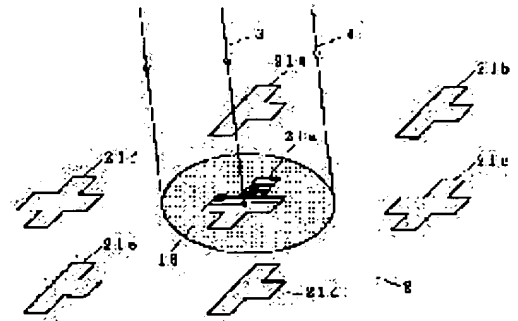
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(54) METHOD AND APPARATUS FOR DRAWING OF PATTERN

(57)Abstract:

PURPOSE: To draw a pattern with high sensitivity while its high resolution is being maintained.

CONSTITUTION: When a very small pattern 21a as one of mutually isolated very small patterns is drawn on a resist film 2 which has been spread on the surface of a semiconductor wafer, an electron beam 3 is scanned inside the very small pattern 21a. At this time, a local region 16 which contains the very small pattern 21a is irradiated with a laser beam 4, and the local region 16 is heated instantaneously. Very small patterns 21b to 21g and the like other than the very small pattern 21a are situated outside the local region, they are not heated, and the very small patterns 21b to 21g and the like are held at a low temperature because the semiconductor wafer is cooled by liquid nitrogen. All very small patterns are drawn in the same manner. As a result, all the patterns are drawn at a high temperature, and they are not heated before they are drawn. Thereby, the resolution of the patterns is not degraded due to a temperature rise, and the patterns are drawn with high sensitivity.



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